



International Institute for
Applied Systems Analysis
www.iiasa.ac.at

An Overview of Organizational Research in Regional Development: Five Parallel Case Studies

Davies, C., Demb, A. and Espejo, R.

IIASA Working Paper



1976

Davies, C., Demb, A. and Espejo, R. (1976) An Overview of Organizational Research in Regional Development: Five Parallel Case Studies. IIASA Working Paper. WP-76-013 Copyright © 1976 by the author(s). <http://pure.iiasa.ac.at/567/>

Working Papers on work of the International Institute for Applied Systems Analysis receive only limited review. Views or opinions expressed herein do not necessarily represent those of the Institute, its National Member Organizations, or other organizations supporting the work. All rights reserved. Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage. All copies must bear this notice and the full citation on the first page. For other purposes, to republish, to post on servers or to redistribute to lists, permission must be sought by contacting repository@iiasa.ac.at

AN OVERVIEW OF ORGANIZATIONAL RESEARCH
IN REGIONAL DEVELOPMENT: FIVE
PARALLEL CASE STUDIES

C. Davies, A. Demb and R. Espejo

March 1976

WP-76-13

Working papers are internal publications intended for circulation within the Institute only. Opinions or views contained herein are solely those of the authors.

PREFACE

In this paper we present proposals for a programme of research into problems of complex organizations. The area of interest is organization for integrated regional development and our research will be based on five regional development cases undertaken in different circumstances in various parts of the world.

Organization theory is not a unified field of research but includes many complementary approaches. The authors of this paper reflect this diversity. However, in designing these research proposals we find important points of commonality. The overall research conception based on a multi-organization approach is one such point. This is supported by a common definition of integrated regional development, which we pose for the purpose of organization study, and a common specification for the case descriptions, which form the first output stages of our programme. However, in the analytic stages, which follow these descriptions, we see value in following somewhat different approaches. This diversity should strengthen the value of the final output.

In this paper we cover generally the scope and purposes of the overall programme. The scope of case descriptions is presented together with an outline of the questions which are addressed in the post-description analytic stages. However, the detail of the various conceptual approaches that we will use are not included here. They are to be found in three more specialised papers which accompany these proposals.

- DAVIES, Cyril - "A Force Field Approach to Organizational Analysis of Regional Development."
- DEMB, Ada - "Application of a Model of Planned Change to an Organizational Analysis of Regional Programs."
- ESPEJO, Raul - "A Method to Study the Organizational Dimensions of Regional Programs."

Introduction

Research carried on at IIASA should try to satisfy a set of needs not all of which would be found in many other institutes anywhere. It seems to us that any proposal should first make a scientific contribution to the research field, should fully utilise the opportunity provided by an international east-west center, and should be directed towards questions of practical importance in the world. In this paper we present a conceptual framework for the analysis of the organization of regional development programs, which we intend to apply to five cases in different parts of the world. The cases are Tennessee Valley, Bratsk-Ilimsk, Lublin-Vistula Region, Guayana (Venezuela) and Scotland. Before describing this approach we will present a very general overview to demonstrate the fit between this research and the set of requirements we have suggested.

I. Scientific Contributions

The scientific contributions to be made from an application of organizational analysis to regional development inhere both to the field of organizational analysis and theory and to regional science. The nature of contributions to organization studies is largely methodological, and focuses upon the applicability of theory to new situations in a variety of cultural settings. The contribution to regional science, by contrast, might be described as largely empirical and descriptive.

To Organization Studies. First, in the context of the management of large-scale systems, analysis of regional development provides an opportunity to observe a management situation with particular coordinative and integrative needs. Further, it presents the opportunity to study the implementation of a major planned change for such a system.

Secondly, it is particularly interesting to explore the applicability of organization and change theory to the design and management of regional development. The analysis will

involve advanced and novel application of concepts and models from these two research areas, and provide the opportunity to judge the level of insight that they can provide.

Finally, the various scientific approaches to studying organizational questions are in more danger than most disciplines of using concepts which reflect the culture in which they were developed and in which they are applied. The unique position of IIASA allows the possibility of drawing upon case experiences in very different settings and thereby offers the potential for development and testing of a method of analysis which can be used in widely varying national settings.

To Regional Science. The contributions to regional science are quite straightforward. First, while there are large numbers of cases of regional development documented there is very little that focuses on the organization and management practices. As a minimum we can go some way to filling this gap.

Second, the documentation of five parallel case studies will provide the basis upon which comparative analysis can be built at a later stage. While we will not specifically focus on comparative analysis, we do believe in the value of the complex, less-structured comparison that scientists and regional specialists can make in their own minds, using models which are relevant to their own needs.

Finally, the case analyses will document organizational "solutions" to regional development in a wide variety of conditions within which each "solution" appears to function. As such, the analyses should provide the baseline for a contingency theory of organization under various regional (economic, social...) conditions. Ultimately, we hope this type of research will provide models which can be of use to those undertaking new regional development efforts.

II. Definition of Integrated Regional Development

Throughout the world many different approaches to the achievements of the development of a region have been adopted. Opinions differ as to which can be considered as cases of integrated regional development. Certainly not all are of equal interest for the purposes of organisational study. To delimit those cases which are of interest to us, we pose a set of criteria for the selection of cases which we feel is well adapted to the needs of organisational analysis. The criteria are fourfold: Integrated regional development projects which are of interest are a) the result of a political decision taken outside of the region, which sets b) goals which are of a multi-sectoral nature, the achievement of which c) requires organisational changes for the region which must be managed so that d) activities are coordinated across sectors.

Let us consider what this definition might exclude. One can consider the development of a region occurring under three sets of circumstances.

The first is where resource endowments (human and physical) of a region and locational factors lead to development by natural market or economic factors. In general this is how most currently developed regions achieved their state of development. Infrastructure in the region grows naturally as the demand for it increases. The literature suggests that both planned and market economies are similar in this respect.

The second case is where the existing field of forces is not sufficient to trigger the growth of a region but where government takes action to alter the force field. Typically this would be by providing investment incentives, fiscal incentives or premiums for employing labor. However, within this modified force field development is allowed to occur naturally. Our expectation is that this approach is used almost solely within market economies. Development occurring in either of these circumstances are excluded according to our definition.

The third case, which corresponds to our area of interest, is where economic forces will not lead to the development of a region in a suitable time scale, and where the government takes

a policy decision to develop. This may be for a variety of reasons. For example, the development may be justified primarily by non-economic reasoning, or the required investment or levels of risk may be too high to be handled through normal economic procedures or perhaps normal economic factors would not lead to balanced investment. There is no equation of this case with "uneconomic" investment. This policy will be implemented by organizational and other means. It is the management (in the wide sense of that word) of this process which forms the object of our study.

III. Pre-Conditions for a Multi-Case Approach

A major assumption of this research is that the study of five cases in serial will provide a level of learning greater than that which would occur from the study of any one case alone. There are caveats to be made to this statement which yield a number of requirements to be met, in order for this objective to be achieved. We are too well aware of the number of case studies which do not contribute to one another because they are describing quite different animals, and are therefore, non-comparable even in a serial manner.

Comparability is dependent upon several factors. First, the language which is used to describe the cases, i.e. the frame of reference of the description, must be culture-free. At the most obvious level it seems that there are many mechanisms used in socialist societies which have no parallel in market economies. If we are going to create a language and framework which is equally applicable to both we have to go beyond the description of form and inquire into function. We hypothesize that, at a particular level of abstraction, not only are there common functions between organization forms used in different settings but that all functions are common. The functions we have in mind are policy and adaptation, operational control and management, coordination, and operations. Thus each of the cases must describe the situation in terms of these common elements, rather than by using culture-bound organizational terminology.

Second, the cases must describe organizational solutions to the same problem. This statement is based upon a view of regional development as a system of organizations dealing with regional development program, which are embedded within a larger system (national setting) and which, in turn, embed subsystems (activities within the region). (See Fig.1. pg.7) If the cases are to contribute to one another, the focus of attention in each case, must occur at the same level within the respective systems, i.e. each case must provide the same level of resolution of description. Such a requirement provides the reader with the opportunity to study organizational solutions to problems at the

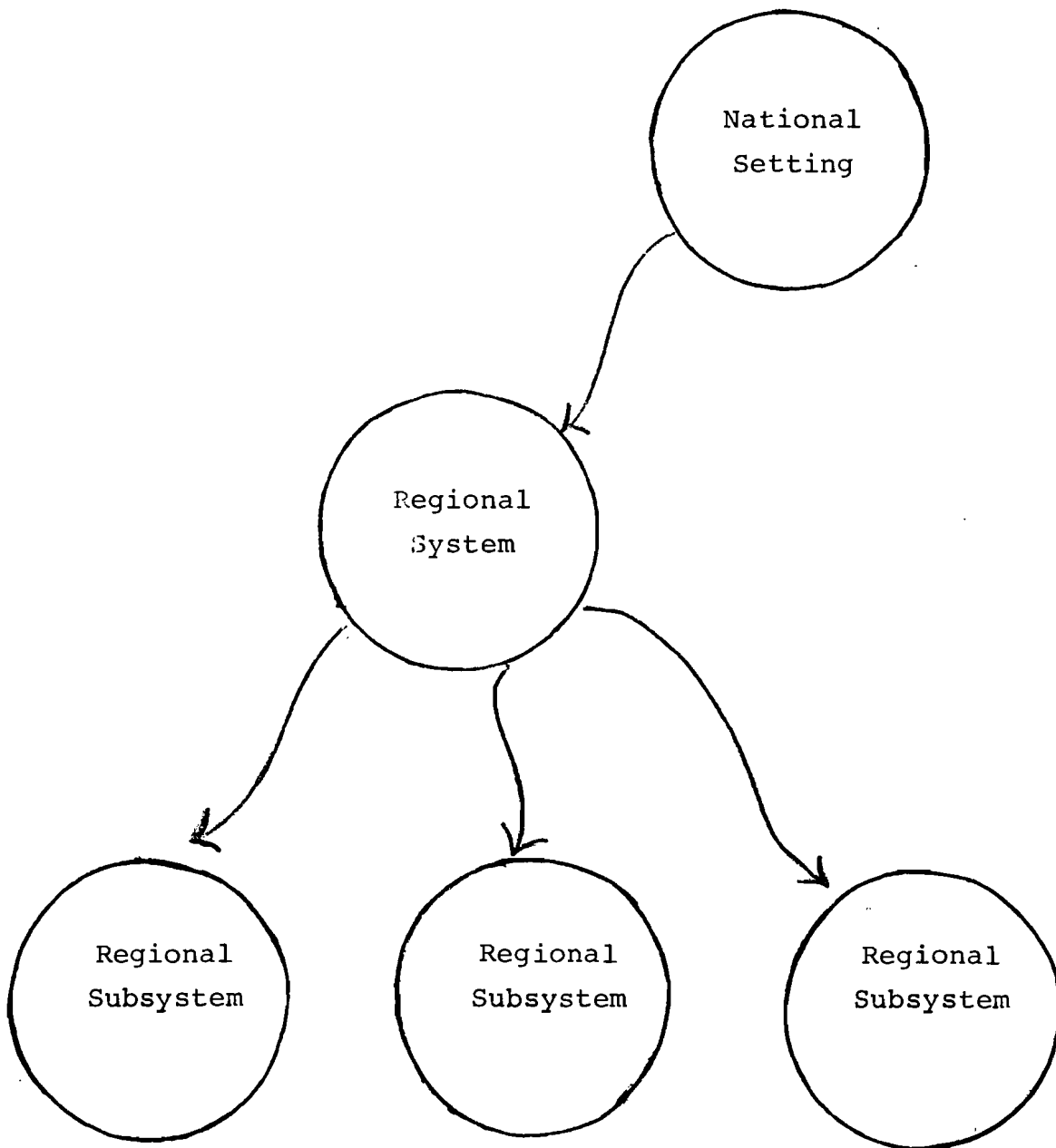
same level within a system, and thereby, to learn from more than one case.

Finally, this systemic view of regional development suggests two elements which need to be included in the description. Organization, as a matter of definition, is determined both by its functions, and linkages, and by the setting within which it exists. In this case, the activities which the regional system must manage present the functional end, and the national setting represents the environment within which the regional system lives. The national setting and the regional system are interdependent in many ways, e.g. the objectives of the regional system, and it is therefore, important that the characteristics of this setting be included in the description.

Thus, we have outlined three major requirements which the case descriptions must meet if they are to provide learning of a synergistic nature: (1) a culture-free language, (2) a similar level of resolution, and (3) some description of the national setting and the regional activities.

Figure 1.

The Regional System and
Its Relationship to Other Systems



IV. Scope of Case Descriptions

Descriptions of the organizational aspects of the regional development form the first output stage of each of the case studies. The descriptions are of some value in themselves and they provide the data base for further analysis. The descriptions will, of course, meet the needs discussed in the last section.

The most important component of the case description is a mapping of the regional multi-organization. We view the regional system as being embedded in a national setting, and itself containing organizational sub-systems which are concerned with particular regional activities. We have the need to define the boundaries between these systems. Many different definitions are possible, and the definition we choose should be appropriate to the objectives of our study. For example, to define regional organizations as those set of organizations which happen to be operating in the physical region is easy to understand and simple to operationalize, but it lacks any logic in organization theory.

For our purpose we adopt the following procedure. We suppose that by examining goal statements of the regional development (amplified by discussions with policy makers and others in the region) we can identify the relevant set of activities which are the object of the scheme. From these we can identify the first level of organizations which are concerned with these activities. We then follow linkages outwards from these units. As we follow these we will generally classify three groups of organizations. Firstly are organizations we define as part of the regional sub-system of organizations dealing with that activity. These are organizations which have to make no decisions involving trade-offs outside of that activity. The next class are organizations which have to make decisions involving trade-offs between more than one regional activity but have to make no trade-offs between activities in the region and activities outside of the region. This is the set of organizations that we are defining as regional organizations. Above this are organizations which have links with the region but which have to make trade-offs outside the

region. These organizations form the organizational component of the national setting in which the region is embedded.

We recognise this determination of the regional system will not occur in the linear manner suggested. In particular defining the regional activities will likely require some initial designation of regional organizations, and be an iterative process. Also in practice one would not start at the lowest organizational level and fully specify the sub-systems.

This process, at the same time as defining the regional system, also provides the multi-organization mapping that we seek. The types of organization units which are included and the relative reliance placed on informal and formal links will be entirely characteristic of the particular case. It will include any special organizational units forming part of the regional system which have been set up to meet needs of the development scheme.

The regional multi-organization that we describe is, according to our definition of integrated regional development, the result of a process of organization change in the region. The case description will include elements to support the understanding of this change process. To do this we need to refer to the regional organizations as they existed prior to the introduction of the development scheme. Ideally we would wish to provide a description of this past organization in similar depth to the current multi-organization description. However, we recognise the pitfalls of trying to map an historic system; these pitfalls may be extreme in the case of long established schemes. Hence, we recognise that compared to the current system only a partial description may be feasible and that it may need to be supported by reference to current experience in non-development situations.

The remaining aspects of the case description do not refer directly to the regional multi-organization, but to the national setting, and to the development scheme itself. Some organizational aspects of the national setting will have already been described in mapping the regional system. However, the national setting has other relevant components which cannot be described in so structured a way but are necessary to support the

understanding of the case. Included here are such things as ownership patterns in the setting, particular aspects of the legal system as they relate to organization structure (e.g. do two units have, by law, to report to one another?), traditions as they affect organization relations and generally used mechanisms in the setting to achieve organization change. An understanding of these may evolve from our discussions with research institutes specially concerned with these matters.

The final component of the case descriptions relates to the development scheme itself. One cannot sensibly view organization structures separately from the tasks that they were set up to achieve. In the case of the regional multi-organization the task is the management (in a wide sense) of the development scheme activities. Particularly relevant to understand are the inter-dependencies between these activities. A balanced account of this would require the participation of experts in the various physical systems. For the purpose of our case descriptions we will include such information as can be provided by the actors we meet in the study.

V. Analysis

The case descriptions just outlined form the first stage of output of our case studies. We are aware of the need to go beyond this description and our programme includes further analytical stages. The case descriptions provide the data base for analysis.

The analysis makes use of several different tools and considers related but distinct questions concerned with the regional multi-organization. The answers to the questions can provide a basis for making assessments of multi-organization effectiveness.

The details of the different theoretical approaches are presented in the accompanying three papers. One utilises a cybernetic model of organization, the second applies a model of planned change while the third applies a force field analysis to organizational linkages. Some understanding of these approaches is necessary to state our analytic questions with precision. However, it is possible here to indicate only their nature.

We are concerned with exploring the ways in which different national settings support the creation and maintenance of regional organizational systems which are adapted to support integrated regional development. This must include an understanding of what mechanisms are available in the national setting to support the development, and some assessment of the degree of organizational change that was required to achieve a satisfactory regional organizational system. A further question concerns the degree to which the regional system is adopted to the needs of the development scheme.

The different theoretical approaches interpret some of these questions in slightly different ways, and give different degrees of significance to the different parts. They are, therefore, to be viewed as essentially complementary approaches rather than competing ones. The outputs of all of them taken together should help to provide a richer understanding of the important issues of organization in regional development.

VI. Logistics of the Research

Nature of Sites

Each of the cases for the research program can be characterized along a number of dimensions, across which they may vary widely. This discussion of logistics will describe the general characteristics of each of the case settings and our view of the effort required to bring each to a point where it can support a common level of analysis.

Table 1. characterizes the settings along five dimensions:

1. the nature of the primary objectives of the development program;
2. the stage of development of the regional program activity;
3. (a) the characteristic of the national setting;
(b) the characteristics of the region prior to development;
4. the type of analysis of the regional program which has been carried out to date and its availability.

Tennessee. The primary objective of the TVA program was the development of the Tennessee River Valley. The major vehicle was the development of a regional resource which, while it contributed to the national GNP, was not primary objective. The program was conceived in 1933. It has been an ongoing project which has evolved over time into a variety of program areas. This national setting provides one end of an economic spectrum; the United States has a market economy, characterized by private enterprise activity. There are a number of historical studies of TVA which have been published and the analysis of the role of TVA which was the result of the LOP field study in 1975 is available.

Scotland. Regional development connected with national resource development, exploitation of North Sea Oil, is the focus of the Scottish case. Oil exploration was begun approximately five years ago; however, specific attention to regional impacts are more recent. The Scottish economy is a mixture of private and state enterprise. The material on which we are basing preparation for the field trip is composed of government

DIMENSIONS \ SETTING	TENNESSEE	SCOTLAND	GUAYANA	LUBLIN	BRATSK
1. Regional Program Primary Objectives	Regional Development via regional resource development.	National Resource Development (oil) regional benefits	National Resource Development (Hydro-power, iron) regional benefits.	National Resource Development (coal) parallel regional development.	National re-source Development (Hydro-power, mineral) simultaneous regional development.
2. Stage of Development	1933 - initiated 40 years ongoing	± 1970 - oil exploration initiated	1953 initiated 20 years ongoing	1976 - planning begun, ongoing first stages	1954 ± initiated 20 years ongoing
3. Setting					
National (a)	Market Economy Developed	Mixed Economy Developed	Mixed Economy Developing	Planned Economy Developed	Planned Economy Developed
Regional (b)	Industrial underdevelopment compared to national setting.	Industrialized	Totally undeveloped	Small agricultural settlement	Hydro-dam, support settlement only.
4. Type of Analytic Material Available as of March, 1976	Published historical studies IIASA field study research report	Published and Official Material	Published historical analysis Government documentation Direct personal communication with Corporation	Internal Polish documentation Interview data 3 field trips	Special IIASA documentation Historical published material

Table 1. General Characterisitcs of Five Cases

documentation, legal documentation and published reports which have been made available to us.

Guayana. The Venezuelan case also represents an effort aimed at the development of a national resource, specifically hydro-power and iron resources. Hydro-power development began in 1953, and the Guayana Corporation began operating in 1960. The development has been ongoing during this period. The Venezuelan economy can be characterized as mixed, and the country provides an opportunity for study in the developing world. The material available to us includes material by those involved in setting up the Corporation, and internal publications. The Corporation have invited us to request further information, but the quality of data is subject to the limitation that always applies to written communication.

Lublin. The Polish case study also represents the development of a key national resource, coal. Planning for the development of the area began in late 1975, and the exploratory steps are now underway to determine the nature and extent of the coal deposits. Planning for regional development is also underway as one of a number of national research questions. Poland has a planned economy and represents another developed country case. There is some internal Polish material available on regional development in the country; however, the majority of our material to date comes from the reports of the three field visits to Lublin, Warsaw and Katowice.

Bratsk. The Soviet case represents the fourth instance where the motivating force for the development program was the development of major national resources, hydro-power and mineral resources. The regional program is planned around these objectives. Early hydro-power activity began in the mid-1950's, and thus the development has been ongoing for 20 years. The Soviet case offers another view of regional development in a developed country with a centrally planned economy.

In four of the cases, the major stimulus for the regional development program was the desire to develop a national resource.

In these cases the integration of the benefits of the resource development into the region resulted in a plan for regional development. Four of the cases represent developed countries, and the fifth (a national resource case) is developing. Three cases (Tennessee, Lublin and Bratsk) have been ongoing for at least 20 years and these cases include the three types of economic systems. Table 2 summarizes these characteristics:

Table 2. Distribution of Cases

Economy	Developed	Developing	20+ years	New
Mixed (2)	x	x	x	x
Planned (2)	x x		x	x
Market (1)	x		x	

We find that there are a number of pairs with contrasting characteristics:

- a) ongoing programs in mixed, planned and market economies;
- b) new programs in planned and mixed economies;
- c) ongoing and new programs in different planned economies;
- d) ongoing programs in both developed and developing national settings.

Thus, while our choice of sites has been constrained by prior IIASA research and agreements, as well as logistical considerations, we feel that the five cases present a representative sampling.

Output and Logistics of Data Collection

There are three types of output we would like to produce for each of the case studies: a prefield report, a field report, and a multi-organizational case analysis. For three of the cases, Tennessee, Bratsk and Guayana, internal analysis of primary organizations involved in the regional development program are planned.

Status of Documentation Data. As can be seen from Table 3. much of this work has already been accomplished and plans have been set for all but one major data collection stage. The pre-field reports are finished and available for the four cases where this is applicable: Tennessee, Scotland, Guayana and Bratsk. The Tennessee report is the pre-TVA Conference discussion report prepared by LOP for the spring of 1975. The Bratsk report is in the form of a discussion paper prepared for the Bratsk-Ilimsk Conference held at IIASA in March 1976. The other two reports presently exist as internal ORG memorandum (Espejo and Davies). The procedure in Lublin was different than the others. There were three field trips, each of which was supported by previous trip reports.

Field reports are available for two of the cases. The TVA report was finished during the fall of 1975. It should be noted that this field report includes the analysis of the TVA which will also serve as the internal analysis noted in Table 3. (p.17). Field visits to Lublin - three in all - have been documented internally to ORG and are available. The Bratsk field report will be prepared as the ORG's contribution to the report of the entire field trip to Siberia.

Additional Data Requirements. To complete the data requirements for the five parallel case studies the following actions are proposed, or already scheduled. A field trip to Scotland has been arranged during the first week of April. A field trip to Bratsk-Ilimsk is scheduled as part of the activity of the LOP group activity. It is hoped that a final field visit to Poland can be arranged to fill in the gaps which still exist from the earlier trips. These trips were organized before the

	TENNESSEE	SCOTLAND	GUAYANA	LUBLIN	BRATSK
<u>Scope of Study</u>					
Internal	x				*
Multi-Organization	*	*	*	*	*
<u>Output: Documentation by October</u>					
Prefield	x	x	x	x	x
Field report	x	*		x	*
<u>Internal Analysis</u>	x		(*)if field study		*
<u>Five Parallel Case Research Report</u>	*	*	*?	*	*
<u>Data Needs</u>					
Before September	Expand scope through Literature	Field Study 4-11 April	Written questions to authors Field study	Further short field study	Field Study scheduled (1 month)
Ultimately			Field Study		

x = to be done

* = completed/available as of March 1976

Table 3. Data Collection Needs, Scope of Study and Proposed Output

research was conceived and thus, although the authors all participated, there are some details which remain to be learned. Finally, if the Guayana case is to be brought up to a level of information which supports the multi-organizational analysis, and especially, the internal analysis of the Guayana Corporation, it would seem that a field trip is essential. We are not sure of the possibilities for such a trip within the scope of the October time-table of this phase of research. Without such a trip we are clear that the multi-organizational analysis will be limited and thus create a gap in that we will have been unable to include either a developing country, or a regional program occurring in a completely undeveloped region.

The Tennessee case has certain special requirements which do not require additional field work. The fieldwork report presently takes the form of a LOP report on the TVA, which serves as the material for the internal organizational analysis. To use Tennessee as a case within the parallel multi-organizational analysis, we need to expand the scope of that project to embed the study of TVA within the organizational setting of the region. We believe this can be done using only published material readily available through library sources, although the magnitude of the task at this time is not clear. It is largely dependent upon the level of detail required to match the other cases.

Output. The field reports for each setting should be available on a case basis during the spring and summer months. (The schedule for the Siberia trip will determine exact dates.) The final research report which will combine all five cases, and which will, perhaps provide some comparative insights, we expect to finish by October of 1976. It is likely that there will be additional reports based on the data collected during the project, but the scope or number of these is not clear at the present time. Two possibilities might be a monograph on the application of the cybernetic paradigm, and a monograph on aspects of change theory.

Summary

The project is an ambitious one, and we are aware of our limitations - of both manpower and time. The final products will, of necessity, reflect these limitations. We believe that the project can be viewed in either a short or long-term time horizon. In the short term, as a project whose life ends in the fall of 1976, it will have provided a baseline documentation of regional development in five settings, and an initial test of a methodology for the analysis of organizational issues in regional development. In the long-term, it provides a methodological base to support comparative analysis. whose level of detail can be augmented by continuation (particularly by a field visit to Venezuela) and extension of both setting and analysis.